IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Parkvall et al. Atty. Ref.: 2380-289

Serial No. 09/742,283 Group: 2616

Filed: December 22, 2000 Examiner: Sefcheck, G.

For: SCHEDULING TRANSMISSION OF DATA OVER A TRANSMISSION CHANNEL BASED ON SIGNAL QUALITY OF A RECEIVER CHANNEL

Before the Board of Patent Appeals and Interferences

REPLY BRIEF FOR APPELLANT
On Appeal From Final Rejection
From Group Art Unit 2616

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Alexandria, VA 22313-1450

REPLY BRIEF

Sir:

This reply brief responds to several new issues raised in the Examiner's Answer mailed November 30, 2006. Many of the erroneous arguments and assertions made in the Answer are not addressed here; instead, the Board should refer to the relevant sections in the Appeal Brief for Appellants' positions.

The Examiner's Answer and final rejections rest on an improper reading of the claims. The Examiner takes the position that "it is not a requirement of the claims that the determining of the condition of the second channel from the second node to the first

node be the same second node." See page 18 of the Answer. In other words, even though independent claims 1 and 26 specifically refer to "the second node" referring back to the same second node as initially defined in the claims, the Examiner believes he is not bound by that language and can substitute some "other" second node in an attempt to justify the rejection. Similarly, one base station and one wireless user equipment are defined and referred to in independent claims 14 and 39. No additional or other base station is defined. But the Examiner believes that sometimes the claimed base station can be read on the serving base station 61 in Yuen and other times the claimed base station can be read on the target base station 62.

This claim construction articulated and applied by the Examiner is contrary to common sense and to well-established claim construction principles. It is common sense that when a node is identified as the second node and later the term "the second node" is used, that the reader will understand that the same second node as earlier identified is being referred to. The same is true for the "base station" in claims 14 and 39.

The Examiner suggests that interpreting "the second node" in such an extraordinary manner is justified because the preambles of the independent claims are not limiting and because such an interpretation is consistent with the "preferred embodiment of the invention as being when a mobile unit is involved in a soft handover between two base stations." Page 15 of the Answer. Both justifications are unsupportable.

Regarding the preamble, the Examiner never performs the analysis mandated by the Federal Circuit to determine whether the preamble is to be given weight. The Examiner simply dismisses the preambles as intended use. But the central test is if "the

claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999). Indeed, "a claim preamble has the import that the claim as a whole suggest for it." *Bell Communications Research, Inc., v. Vitalink Communications Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995).

The preamble of claim 1 recites: "For use in a system where data packets are communicated from a first node over a first channel to a second node and a feedback signal is sent back to the first node from the second node over a second channel, a method comprising." The first step of that method then recites: "the first node determining a condition of the second channel." Clearly, the first step continues from and depends on the language in the preamble. Later steps refer to the communication that has been established in the preamble such as "for the first node to accurately continue receiving a feedback signal from the second node" and "the first node scheduling further transmission of data packets over the first channel." The preamble of claim 1 provides the context and meaning for the balance or body of claim 1. In short, it gives life and meaning to the preamble's stated use.

Regarding the Examiner's justification based on interpreting the claim terms in light of a preferred embodiment in the specification, the Federal Circuit has cautioned that while the claims of an issued patent are interpreted in light of the specification and prosecution history, this is not the mode of claim interpretation to be applied during

examination. *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1369 (Fed. Cir. 2004). The words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification. *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372 (Fed. Cir. 2004).

The Examiner refers to pages 4-7 of the specification which describe background and pages 11-12 that relate to ARQ being coordinated in the base station as opposed to a radio network or base station controller. There is no text here limiting the claims to soft handover. Indeed, soft handover is just one non-limiting example application. Regarding the alleged preferred embodiment, there is no single preferred embodiment disclosed. Instead, multiple, example, and non-limiting embodiments and applications are described. See, e.g., "[t]wo *non-limiting, example*, downlink applications of the present invention will now be described in the context of the communications environment shown in Fig. 5." Page 11, lines 24-26 of the specification (emphasis added). The following paragraph from the specification at page 11, line 27-page 12, lines 14 is repeated here for convenience:

> In the first, preferred, example downlink implementation, the ARQ protocol is located and operated in the base station that is transmitting downlink data traffic to a user equipment unit 3. As described above, performing ARQ operations and data transmission scheduling operations in the base station provides significant advantages, including reduced amounts of signaling and delays pertaining to the ARQ protocol in the radio access network, as well as increased data transmission capacity and efficiency. However, in order to ensure proper operation of the ARQ protocol, it is important that the ARQ feedback signals from the UE, such as acknowledge, negative acknowledge, and/or lost, be accurately received and decoded in the transmitting base station. Accordingly, the transmitting

> base station node determines the condition of the uplink channel. Based on the condition of the uplink channel, the base station schedules transmission of data packets over the downlink channel to the user equipment. In general, the base station delays transmission of the data packets over the downlink channel to the user equipment until there is a sufficient probability that an ARQ feedback signal (or other feedback signal) will be received in the base station. Of course, one or more other criteria may be taken in account.

Review of this text shows that there is just one base station rather than the two base stations that the Examiner asserts. Soft handover applications are disclosed but the relationship between the UE and a transmitting base station remains: "In general, *the* base station delays transmission of the data packets over the downlink channel to the user equipment until there is a sufficient probability that an ARQ feedback signal (or other feedback signal) will be received in *the* base station." Page 12, lines 10-13 of the specification (emphasis added).

There is no definition in the specification that the term "'second node' constitutes two base stations in communication with a mobile during soft handover," as alleged by the Examiner on Page 18 of the Answer. The Examiner's claim construction is faulty. Using the proper plain and common sense understanding of the term "the second node," Yuen fails to disclose the features recited in the independent claims.

Nearly all of the Examiner's arguments and reasoning in the Answer rest on this faulty claim interpretation. The final rejections should be reversed on this error alone. For example, as explained in detail in the Appeal Brief, Yuen's base station 61 does not delay further transmission to the mobile until the quality of the uplink channel between the mobile and base station 61 exceeds a predetermined threshold. The delay in Yuen

referred to by the Examiner has to do with a delay in handing over the connection to another base station 62.

In applying Yuen, the Examiner also ignores the fact that the signal returned to the first node in claim 1 is a feedback signal, and that the feedback signal is an acknowledge signal, a negative acknowledge signal, or a lost signal corresponding to a data packet transmitted over the first channel. Claim 12 explicitly recites "receiving an ARQ feedback signal from the wireless user equipment over an uplink channel from the wireless user equipment to the base station." The downlink signal in Yuen is not a feedback signal. Rather, the downlink signal is a data signal intended for the mobile. It is unreasonable to suggest that the downlink signal magically becomes a feedback signal simply because the mobile determines its signal strength.

The Examiner's claim constructions are clearly erroneous. As explained in the Appeal Brief, multiple features of the independent claims are not disclosed or suggested by the combination of Yuen and Balachandran themselves or in combination with Labonte and/or Garceran. Nor is there proper motivation to combine their teachings as the Examiner proposes. The Board should reverse the outstanding final rejections.

Respectfully submitted,

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